



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,595	02/03/2004	Ashley Stuart Davis		1135

7590 08/14/2006
CYTOSKELETON INC.
C/O ASHLEY DAVIS
1830 SOUTH ACOMA ST.
DENVER, CO 80223

EXAMINER
LUKTON, DAVID

ART UNIT	PAPER NUMBER
1654	

DATE MAILED: 08/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/771,595

Applicant(s)

DAVIS ET AL.

Examiner

David Lukton

Art Unit

1654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Pursuant to the directives of the response filed 5/22/06, claim 7 has been cancelled, and the following claims amended: 6, 8-10, 12, 14, 17-22. Claims 1-6 & 8-22 remain pending.

Applicants' arguments filed 5/22/06 have been considered and found not persuasive.



Claims 1-6 & 8-22 are rejected under 35 U.S.C. §112 second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- The claims are indefinite as to the ultimate objective of the method. The claims recite only process steps, and as such, virtually any objective would be encompassed.
- In claim 9, the phrase "frozen second pyrene actin composition" lacks literal antecedent basis. This rejection could be readily overcome by adding the following phrase to the end of claim 8:

thereby generating a frozen second pyrene actin composition.

- In claim 12, the phrase "frozen second pyrene actin composition" lacks literal antecedent basis.
- In claim 14, the phrase "frozen second pyrene actin composition" lacks literal antecedent basis.



The following is a quotation of 35 USC, §103 which forms the basis for all obviousness rejections set forth in the Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made, absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103.

Claims 6, 10, 11, 15-19 are rejected under 35 U.S.C. §103 as being unpatentable over Drenckhahn (*J. Biol. Chem.* **261**, 12754, 1986).

As indicated previously, Drenckhahn discloses methods of using pyrene-actin to study rates of elongation of pyrene-labelled filaments. Also disclosed (e.g., page 12755, col 1, paragraph 2) is that sucrose inhibit elongation of actin filaments.

Drenckhahn does not explicitly teach a step of concentrating the pyrene actin composition after it is prepared. However, the process of preparing the pyrene actin would result in a dilute solution of the target material; one of ordinary skill would have been motivated to increase the concentration of the pyrene actin to a

point where only small volumes of the solution would be required for the subsequent assay. Further, it is more convenient to store a small volume of a concentrated solution than to store a large volume of a dilute solution.

Applicants have traversed by arguing that in the disclosed procedure, the pyrene actin was not combined with dithiothreitol (or other reducing agent). However, this is not true. Drenckhahn discloses (page 12755, col 1, paragraph 1) a mixture that contains pyrene actin together with KCl, EGTA and dithiothreitol.

The rejection is maintained.



Claims 6, 10, 11, 15-19 are rejected under 35 U.S.C. §103 as being unpatentable over Drenckhahn (J. Biol. Chem. **261**, 12754, 1986) in view of Pollard T. D. (*J Cell Biol* **99**(3), 769-77, 1984)

The teachings of Drenckhahn are indicated above. The Pollard reference is cited because Drenckhahn refers to it (page 12755, col 1, paragraph 1) as the process which was used to make the pyrene actin. In addition, Pollard discloses (p. 771, col 1) a procedure in which the pyrene actin is "pelleted"; this pelleting is a form of "concentration".

Thus, the claims are rendered obvious.



Claims 6, 10, 11, 15-19 are rejected under 35 U.S.C. §103 as being unpatentable over Drenckhahn (J. Biol. Chem. 261, 12754, 1986) in view of Cooper J.A. (*Journal of muscle research and cell motility* 4(2) 253-62, 1983)

The teachings of Drenckhahn are indicated above. The Cooper reference is cited because Drenckhahn refers to Pollard (page 12755, col 1, paragraph 1) as the process which was used to make the pyrene actin; Pollard, in turn, refers to Cooper.



Claims 6, 10, 11, 15-19 are rejected under 35 U.S.C. §103 as being unpatentable over Drenckhahn (*J. Biol. Chem.* 261, 12754, 1986) in view of Blatt William F. (*American Laboratory (Shelton, CT, United States)* 21-30, 1969) or Cordle (USP 4897465).

The teachings of Drenckhahn are indicated above. Drenckhahn does not explicitly teach that when one is in possession of a dilute pyrene actin composition, benefit may accrue to the practitioner upon concentrating the composition. The secondary references disclose methods of concentrating protein-containing mixtures using ultrafiltration.

One of ordinary skill would have been motivated to increase the concentration of a dilute solution of pyrene actin; the secondary references provide a means of accomplishing this.

Thus, the claims are rendered obvious.



THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). The practice of automatically extending the shortened statutory period an additional month upon filing of a timely first response to a final rejection has been discontinued by the Office. See 1021 TMOG 35.

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED AND ANY EXTENSION FEE PURSUANT TO 37 CFR 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lukton whose telephone number is 571-272-0952. The examiner can normally be reached Monday-Friday from 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang, can be reached at (571)272-0562. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.



DAVID LUKTON, PH.D.
PRIMARY EXAMINER